1. BASIC DESCRIPTION

1.1. COMMAND MISSION

The mission of NAVPACMETOCCEN WEST Guam as set forth in NAVMETOCCOMINST 5450.9 is: “To provide, within areas of responsibility as assigned by the Commander, Naval METOC Command, operational METOC services to U.S. and Allied units operating within the Fifth and Seventh Fleet Areas of Responsibility (AOR).”

1.1.1. GEOGRAPHIC LOCATION OF GUAM

The island of Guam is located in the Mariana Island Chain approximately 1500 mi (2415 km) east of Manila and 3300 mi (5313 km) west-southwest of Honolulu. The islands are the dividing line between the Philippine Sea to the west and the Pacific Ocean to the east. Guam is the southernmost and largest island, totaling 212 sq mi (549 sq km), which equals the combined area of the other 14 Marianas islands. It is shaped like a "footprint" 35 mi (56 km) long and varies in width from 4 to 9 mi (6.5-14.5 km).

The climate of Guam is predominately warm and humid throughout the year. Afternoon temperatures are typically in the mid to upper eighties (Fahrenheit) and nighttime temperatures fall to the mid to lower seventies (Fahrenheit). Although temperatures and humidity vary only slightly throughout the year, rainfall and wind conditions vary markedly.

There are two primary seasons on Guam: the dry season which extends from mid-January through mid-May and the rainy season which extends from mid-July to mid-November. June and December are considered transition months.

1.1.2. COMMAND LOCATION

NAVPACMETOCCEN WEST Guam is located in Building 200 on Nimitz Hill, at an elevation of 565 ft (172 m) above mean sea level (MSL). NAVPACMETOCCEN WEST Admin is located on the second deck of Bldg. 200. JTWC Admin spaces are also located on the second deck. Command Operations, including JTWC, are located in Bldg. 200 Annex.

1.2. AREA OF RESPONSIBILITY (AOR)

Naval Pacific Meteorology and Oceanography Center West/Joint Typhoon Warning Center (NAVPACMETOCCEN WEST/JTWC) Guam's AOR encompasses the marine areas of the Pacific and Indian Ocean basins (including the Arabian Gulf) from the southern tip of Africa to 60^{o} South along 17^{o} East on the western boundary. The eastern boundary extends from 66° North, southward along the International Dateline to 60° South. For WEAX/OTSR and High Wind/Sea Warnings 180° serves as the eastern boundary for purposes of simplification. See (Fig 1.1)

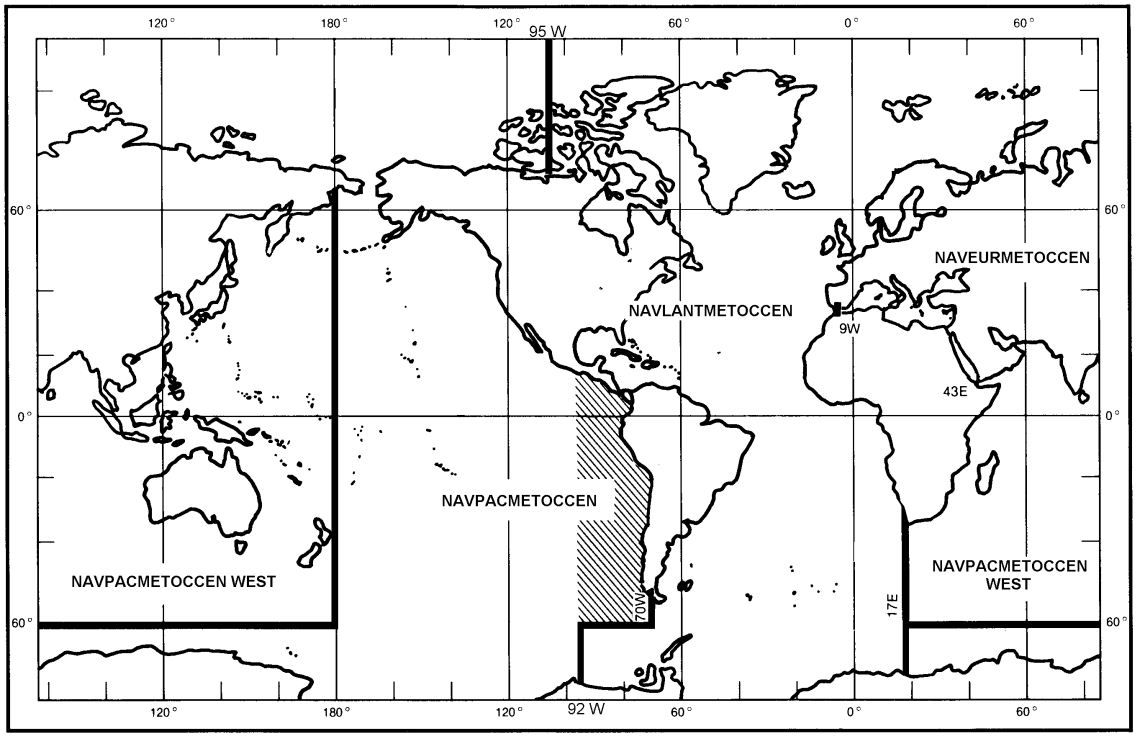

Figure 1.1 Area of Responsibility (AOR)

1.3. COMMAND ORGANIZATION

NAVPACMETOCCEN WEST consists of the Joint Typhoon Warning Center, Equipment Support Department and the Operations Department.

1.3.1. JOINT TYPHOON WARNING CENTER

The only defense against a tropical cyclone is adequate preparation. Adequate preparation is dependent upon timely warning which is, in turn, based upon the receipt of data and accurate forecasts of tropical cyclone formation, position, movement, intensity and wind distribution.

The Joint Typhoon Warning Center (JTWC), a joint Navy and Air Force organization, is co-located within the command and under the direction of the Commanding Officer of NAVPACMETOCCEN WEST Guam. JTWC provides tropical cyclone warning support to all Department of Defense activities in the Western Pacific and Indian Ocean regions. NAVPACMETOCCEN WEST/JTWC, in conjunction with the National Weather Service, provides tropical warnings to the governments of the Commonwealth of the Northern Mariana Islands, The Republic of the Marshall Islands, The Republic of Belau, The Federated States of Micronesia, Wake Island and Guam.

1.3.1.1 MISSION

The mission of the Joint Typhoon Warning Center (JTWC) is defined by USCINCPACINST 3140.1W and includes the following primary functions:

1. Continuous monitoring of all tropical weather activity in the Northern and Southern Hemispheres, from 180^{o} longitude westward to the east coast of Africa, and the prompt issuance of appropriate advisories and alerts when tropical cyclone development is anticipated.

2. Issuance of warnings on all significant tropical cyclones in the above area of responsibility (AOR).

3. Determination of requirements for tropical cyclone reconnaissance (primarily satellite) and assignment of appropriate priorities.

4. Post-storm analyses of all significant tropical cyclones occurring within the western North Pacific and North Indian Oceans.

5. Coordination with the Fleet Numerical Meteorology and Oceanography Center (FNMOC); the Naval Research Laboratory (NRL), Monterey, California; and Space and Naval Warfare Systems Command (SPAWAR/PMW-175) on the maintenance and operational evaluation of tropical cyclone models and forecast aids and the development of new techniques to support operational forecast requirements.

1.3.1.2. ORGANIZATION

Since its establishment in 1959, JTWC has functioned with the USN as the lead agency through the Commanding Officer, NAVPACMETOCCEN WEST/JTWC, Guam. Operational and administrative chain-of-commands are depicted in Table 1.1.

1. USAF billets include the Director, Typhoon Duty Officers and Typhoon Duty Assistants.

2. USN billets at JTWC include the Deputy Director, Typhoon Duty Officers, Typhoon Duty Assistants and a Civilian Technical Assistant.

Table 1.1 JTWC Organization

(Operational)

USCINCPAC
*
JTWC
**
Director (USAF O5)
***
Deputy Director/JTOPS (USN O4)/Technical Assistant (GM13)
****
Typhoon Duty Officers (USN/USAF O3)
*****
Typhoon Duty Assistants (USN/USAF E1-E4)

(Administrative -- U.S. Navy)	**(Administrative -- U.S. Air Force)**
NAVPACMETOCCEN, Pearl Harbor	36 Operational Support Squadron (36 OSS)
*	*
NAVPACMETOCCEN WEST, Guam	36 OSS/OSJ
**	**
(All assigned USN personnel)	(All assigned USAF personnel)

1.3.2. EQUIPMENT SUPPORT DEPARTMENT (ESD)

The Equipment Support Department is staffed by Electronics Technicians (ET), specifically trained in the repair of meteorological equipment, Data Systems Technicians (DS) and Data Processing Technicians (DP). ESD is responsible for the installation, maintenance and upgrades of all equipment, software and buildings in the command. On a limited by-request basis, repair and calibration services can be provided to inport units, such as:

1. **Aneroid Barometer** (ML-448/UM Precision Aneroid Barometer or the SK-12509 General Purpose Aneroid (Taylor) Barometer)
2. **Wind Measuring Device (UMQ-5)**
3. **Portable Wind Measuring Kit (AN/PMQ-3)**
4. **Electric Psychrometer (ML-450/UM)**
5. **Mini Rawinsonde System (MRS)**
6. **AN/SMQ-11**
7. **Tactical Environmental Support System (TESS (3))**

1.3.3. OPERATIONS DEPARTMENT

The Operations Department (OPS) consists of assigned METOC Officers and AG personnel. OPS is responsible for the preparation and transmission of AOR forecast products, WEAX, OTSR, Wind/Sea warnings not associated with tropical cyclones and special exercise METOC support.

1.3.3.1. FLEET SERVICES OFFICE (FSO)

The Fleet Services Office is responsible for the Fleet Liaison program, OTSR and WEAX services within the AOR and the Ship Liaison program. FSO is also responsible for OTSR/WEAX services for Fleet exercises, Defense Mapping Agency (DMA) matters and information, the Fleet Users Guide and quality control of OTSR/WEAX products.

1.3.3.2. METEOROLOGICAL SERVICES OFFICE (MSO)

The Meteorological Services Office is responsible for the content and maintenance of NPRNET/SIPRNET websites, content of the Fleet Broadcasts (both GFAX and PMHH/GMWW), climatological requests, Operations Floor products and the quality control program. MSO acts as a coordination center to work with NCTS Guam concerning outages and connectivity. Additionally, MSO is responsible for outage contingencies, PLA verification and special exercise broadcasts.

1.3.3.3. TACTICAL SERVICES OFFICE (TSO)

The Tactical Services Office is responsible for oceanographic and acoustic products and requests. TSO will also act as a coordination center for products and services during fleet exercises and investigate new products and services along with their application within the AOR.

1.4. LOCAL COMMANDS SUPPORTED

NAVPACMETOCCEN West/JTWC Guam provides environmental services to local commands, fleet units and various DOD and Non-DOD assets within the AOR.

1.4.1. COMMANDER, NAVAL FORCES MARIANAS

COMNAVMARIANAS is the largest Naval facility on Guam and provides all administrative and support functions for tenant activities as well as port facilities. COMNAVMARIANAS is the Navy representative to the Commonwealth of Northern Mariana Islands, Federated States of Micronesia, Republic of the Marshall Islands, Guam and Republic of Belau. Local warnings issued by the National Weather Service are forwarded through the AUTODIN system and via phone. Routine services provided to NAVACTS include tropical cyclone warnings, thunderstorm advisories affecting Naval Magazine and small craft advisories for MWR sailing facilities. When a tropical cyclone threatens Guam, heavy weather briefs are held to prepare commands for the onset of damaging winds and to inform all ships in the harbor of sortie plans.

1.4.2. NAVAL COMPUTER AND TELECOMMUNICATION STATION GUAM

NCTS Guam is responsible for all communication circuits serving Seventh Fleet. NCTS Guam antennas are highly sensitive to high winds associated with tropical cyclones; therefore, warnings are coordinated with NCTS Guam personnel.

1.4.3. NAVAL HOSPITAL GUAM

NAVHOSP is responsible for the medical care of active duty and retired military personnel on Guam. Routine services provided to NAVHOSP are tropical cyclone warnings and high wind warnings affecting emergency helicopter operations.

1.4.4. ANDERSEN AIR FORCE BASE

ANDERSEN AFB is located on the northern end of the island and is responsible for all Air Force operations within the western Pacific region. Close liaison exists between JTWC and the 36OSS Weather Office at Andersen AFB.

1.4.5. NAVPACMETOC DET DIEGO GARCIA

NAVPACMETOC DET Diego Garcia is located near 07^{o} S 72^{o} E in the Indian Ocean. The detachment provides standard aviation weather forecasts for transiting aircraft and in-port forecasts for pre-positioned ships of the Military Sealift Command. Routine services include dissemination of synoptic data via Fleet broadcasts. Special products and services are provided upon request.

1.4.6. NAVCENTMETOC FAC BAHRAIN

NAVCENTMETOC FAC Bahrain is located in the Arabian Gulf. The detachment provides meteorological and oceanographic services to components of the Fifth Fleet, USNAVCENT and others operating within the Arabian Gulf, Red Sea and the North Arabian Sea. Routine services include a bulletin board system, local area and specialized forecasts and high wind and sea warnings for the Fifth Fleet AOR.

1.4.7. FLEET SUPPORT

NAVPACMETOCCEN West/JTWC Guam also provides tailored support to COMSEVENTHFLT, components of SEVENTH Fleet including all Task Forces (CTF 70 - 79), components of FIFTH Fleet, U.S. Naval Forces Central Command, U.S. Southern Command, U.S. Coast Guard units, U.S. Army units, Allied Naval Forces, U.S.N.S. and Military Sealift Command (MSC) units throughout the AOR.